

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the instant application:

**Listing of Claims:**

1. (Currently Amended) A method for restricting resources consumed by ghost agents within a grid computing environment, comprising the steps of:

identifying a host, wherein said host is a software object operating ~~in a grid of within~~ said grid environment ~~and movable from one grid to another grid within the grid environment;~~

associating a ghost agent ~~within said grid~~ with said host, wherein said ghost agent is configured to execute at least one operation ~~in said grid~~, wherein said operation comprises replicating and recording at least one action of said host ~~within said grid, and wherein the ghost agent follows the movement of the associated host;~~

~~identifying computing resources used by the ghost agent;~~

~~determining a usage value for each computing resource used by the ghost agent;~~

~~calculating a combined resource utilization value for said ghost agent based on usage values determined for individual computing resources and said host in a current computing resource of said grid, said combined resource utilization value specifying a sum of a total amount of resources required for said host operations and said ghost agent operations in said computing resource;~~

~~comparing said resource utilization value to a usage threshold value pre-established for the ghost agent for the current computing resource, wherein the usage threshold value defines a maximum resource utilization value permitted by the current computing resource for executing operations of the host; and~~

~~reducing a quantity of the computing resources used by the ghost agent if it is~~

determined that the resource utilization value exceeds the usage threshold value

~~determining whether to allow said ghost agent to execute one or more of said operations in the current computing resource responsive to said comparing step such that a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value; and~~

~~moving said host from said grid to another grid within said grid environment; and, in response to said moving of said host, moving said ghost agent from said grid to said another grid.~~

2. (Currently Amended) The method of claim 1, wherein said calculating step further comprises the steps of: calculating a summation, the greatest value, or an average of the determined usage values

~~determining a first value specifying a usage of a first resource type;~~  
~~determining a second value specifying a usage of a second resource type; and~~  
~~calculating said resource utilization based on said first value and said second value.~~

3 (Currently Amended) The method of claim 1, wherein said determining reducing step further comprises the steps of:

~~responsive to determining that no operations of said ghost agent are to be allowed, deactivating said ghost agent;~~

~~starting an idle timer; and,~~

~~activating~~ reactivating said ghost agent when a current time of said idle timer reaches exceeds a predetermined time threshold.

4. (Currently Amended) The method of claim [[1]] 3, wherein said determining

reducing step further comprises the steps of:

queueing attempted operations of the ghost agent during deactivation; and  
executing operations from the queue after the ghost agent is reactivated  
identifying a first operation that requires a first quantity of computing resources;

and

identifying a second operation that requires a second quantity of computing resources, wherein said second operation can be performed by said ghost agent in place of said first operation; and

selecting between said first operation and said second operation based upon said comparing step.

5. (Currently Amended) The method of claim [[3]] 1, wherein the reducing step further comprising comprises the step of:

categorizing operations of the ghost agent into having a low resource requirement  
or a high resource requirement based on pre-determined criteria; and  
restricting to execution of operations that have a low resource requirement  
storing at least one operation in an operation queue when said ghost agent is  
deactivated.

6. (Cancelled).

7. (Cancelled).

8. (Currently Amended) A computer-readable storage having stored thereon, a computer program having a plurality of code sections, said code sections executable by a computer for causing the computer to perform the steps of:

~~providing an interface for associating a ghost agent with a host, wherein said host is a software object operating in a grid of a grid environment, and wherein said ghost agent is configured to execute at least one operation in said grid, wherein said operation comprises replicating and recording at least one action of said host within said grid;~~

~~generating a ghost log for recording data relating to said host operating in a computing resource of said grid; and~~

~~managing a ghost controller configured to compare a combined resource utilization value of said host and said ghost agent in the current computing resource with an established threshold usage value for the current computing resource, to determine whether to allow said ghost agent to execute one or more of said operations in the current computing resource responsive, and to automatically move said ghost agent within said grid environment,~~

~~wherein said combined resource utilization value specifies a sum of a total amount of resources required by said host operations and said ghost agent operations in said computing resource, wherein the usage threshold value defines a maximum resource utilization value permitted by the current computing resource for executing operations of the host, and wherein a combined resource utilization value for the host and the allowed operations does not exceed the usage threshold value,~~

~~wherein in response to said host moving from said grid to another grid within said grid environment, said ghost agent is moved from said grid to said another grid to follow the movements of said host~~

identifying a host, wherein the host is a software object operating within a grid environment and movable from one grid to another grid within the grid environment;

associating a ghost agent with the host, wherein the ghost agent is configured to execute at least one operation, wherein the operation comprises replicating and recording at least one action of the host, and wherein the ghost agent follows the movement of the

associated host;

identifying computing resources used by the ghost agent;  
determining a usage value for each computing resource used by the ghost agent;  
calculating a resource utilization value for the ghost agent based on usage values  
determined for individual computing resources;  
comparing the resource utilization value to a usage threshold value pre-established  
for the ghost agent, wherein the usage threshold value defines a maximum resource  
utilization value permitted; and  
reducing a quantity of the computing resources used by the ghost agent if it is  
determined that the resource utilization value exceeds the usage threshold value.

9. (Currently Amended) The computer-readable storage of claim 8, wherein the calculating step comprises calculating a summation, the greatest value, or an average of the determined usage values said ghost controller is further configured prevent said ghost agent from executing at least one operation based upon said comparison.

10. (Currently Amended) The computer-readable storage of claim 8, wherein the reducing step further comprises the steps of:

deactivating said ghost agent;  
starting an idle timer; and  
reactivating the ghost agent when a current time of the idle timer exceeds a  
predetermined time threshold further comprising code sections for:  
managing an operation queue configured to queue operations for execution by said  
ghost agent.

11. (Currently Amended) The computer-readable storage of claim [[8]] 10, wherein

the reducing step further comprises the steps of:

queueing attempted operations of the ghost agent during deactivation; and  
executing operations from the queue after the ghost agent is reactivated  
further comprising code sections for:  
managing a ghost identifier configured to identify said ghost agent to components  
within said grid environment.

12. (Currently Amended) The computer-readable storage of claim 8, wherein the  
reducing step further comprises the step of:

categorizing operations of the ghost agent into having a low resource requirement  
or a high resource requirement based on pre-determined criteria; and  
restricting to execution of operations that have a low resource requirement  
further comprising code sections for:  
disassociating said ghost agent from said host; and  
associating said ghost agent with a different host.

13-20. (Cancelled).